Senator®

MODEL
44-1897-849
14 H. P.

TRACTOR
OWNER'S GUIDE & PARTS LIST

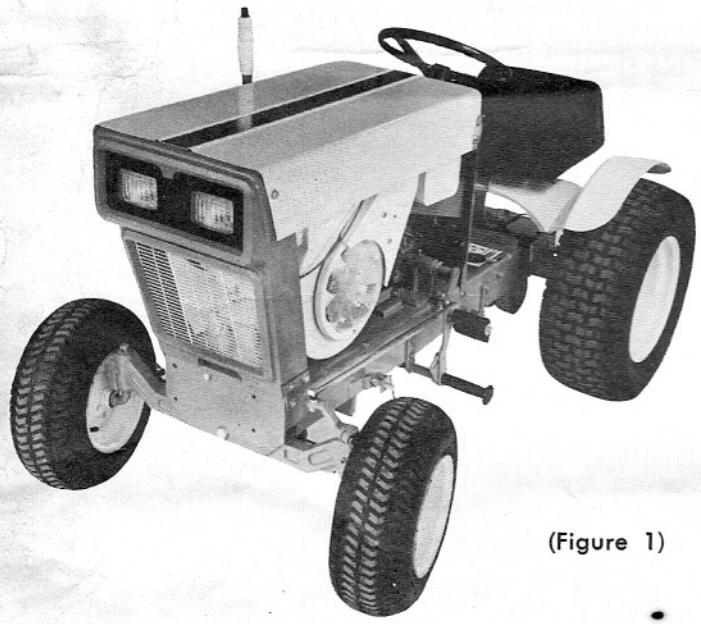
Gilson

Senator® TRACTORS BOX 152 PLYMOUTH, WISCONSIN 53073

1969

ASSEMBLING YOUR TRACTOR

If your Gilson tractor was purchased from a dealer, he should have the unit completely assembled, the engine filled with oil and gas, and the transmission oil level checked.



(Figure 1)

If your tractor was not assembled it will be necessary to assemble as follows:

1. When assembling your Gilson tractor, the fenders should be mounted before installing the wheel and tire assembly. It is possible to incorrectly mount the wheel and tire assembly if installed before attaching the fenders. When fenders are attached first, the wheel and tire assembly will only fit one way.
2. Assemble the wheels to the tractor by slipping the front wheels on the spindles, then locking in place with flat washer and cotter key. The rear wheels are bolted in place with five lug bolts.
3. The steering wheel is loose in the carton, and can quickly be assembled to the tractor with a roll pin and hammer.
4. The battery and electrolyte is in a separate carton in the shipping container of the tractor. Add electrolyte fluid to battery before assembling battery to battery mount. Install battery on battery mount (see page on frame parts for location and hardware). For correct wiring instruction (see wiring diagram) making sure that the wires are connected to the proper terminals. The battery terminals and throttle cables should be coated with petroleum jelly to prevent corrosion.
5. Add oil to crankcase as required by engine specifications.
6. Check oil level in transaxle (see transaxle lubrication instruction).
7. The seat on the tractor has two adjustments. By taking off the nut and lock washer under the seat spring, it can be moved to the desired position. Replace nut and lock washer.
8. The left foot pedal can be adjusted by loosening the bolt that holds the pedal to the adjustment arm. Select desired position and retighten.

TRANSAXLE LUBRICATION

The transaxle is filled with lubricant at the factory. To check oil level there is a fill-inspection plug located at the rear of the transaxle (Figure 2). The oil should be level with the bottom of the inspection hole. If necessary, add multi-purpose gear lubricant, grade S.A.E. 90W.

STARTING THE ENGINE

1. Be sure gear shift lever is in neutral position and blade clutch is disengaged.
2. Open the throttle slightly and move the choke control lever into choke position.
3. Completely depress clutch pedal.
4. Turn on ignition and press starter button.

BREAK IN ENGINE AND TRANSMISSION

1. Refer to the engine manual before operating your tractor.
2. Operate the tractor without load over ½ hour and with light load in the first hour. Operate in each of the four speeds as well as in reverse during this break-in period. Change the engine oil after the first five hours and every 25 hours thereafter.

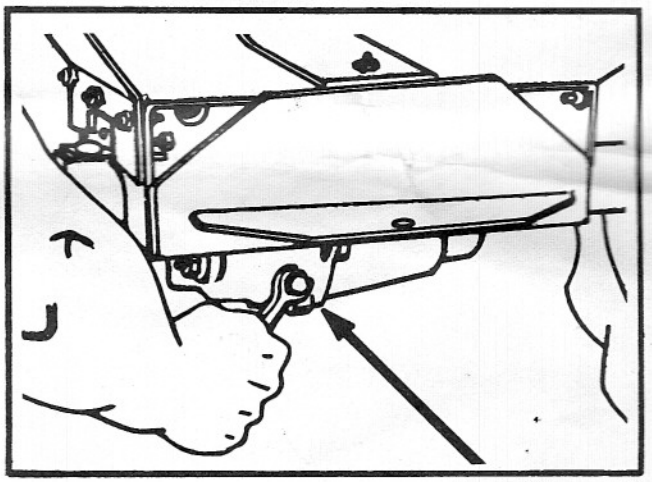
RUNNING THE TRACTOR

1. Disengage the clutch pedal with your foot.
2. Move the gear shift lever into the speed you want. A diagram for shifting is on the frame of your tractor.
3. Do not engage gears at high engine R.P.M. Engage slowly, then increase R.P.M.'s. Do not have tractor moving.
4. Never force the gear lever into any gear position. If gear does not fall in place easily engage clutch then disengage again. By doing this, shift lever will easily go into position. Always depress clutch when shifting gears.
5. Do not attempt to change gears with brakes on.

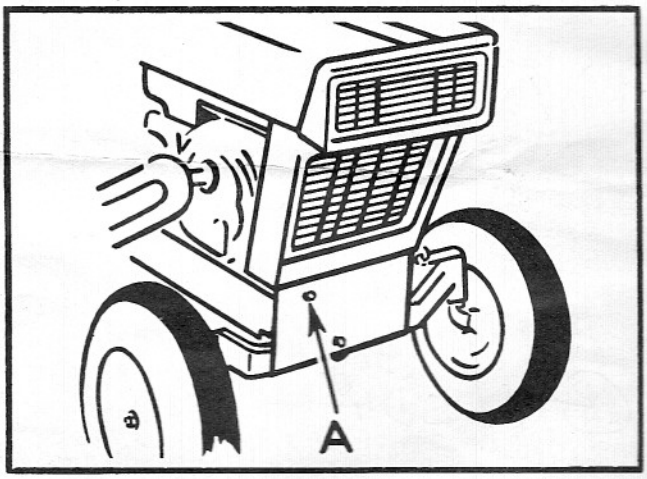
BELT ADJUSTMENT

As break-in period is started belts will set in pulley grooves and tension will slacken. This can be easily corrected by carrying out the following:

Engine belts; loosen four bolts holding engine in frame. All the tractors have an engine take-up block on the front plate of the frame assembly. Engine may be drawn forward by turning screw (A) clockwise (Figure 3).



(Figure 2)



(Figure 3)

ENGINE BELT REPLACEMENT

Engine belt replacement can easily be done by:

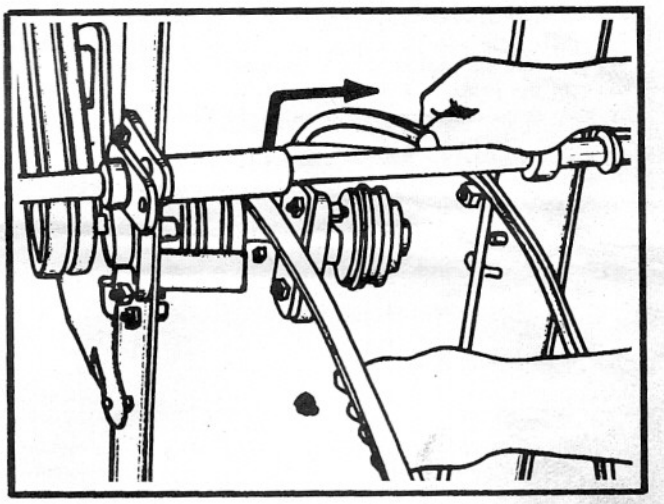
1. Removing the belt guard.
2. Loosen the four (4) bolts holding the engine to the frame.
3. Loosen the engine take-up bolt (A) Figure 3 so engine will slide all the way to the rear of the frame slots.
4. Remove old belts and replace. On two belt drives both belts should be replaced at the same time. NEVER REPLACE ONLY ONE BELT.
5. Retighten engine take-up bolt (A) Figure 3 so that belts are tight.
6. Retighten the four (4) bolts that hold engine to frame.
7. Replace belt guard.

TRANSAXLE BELTS

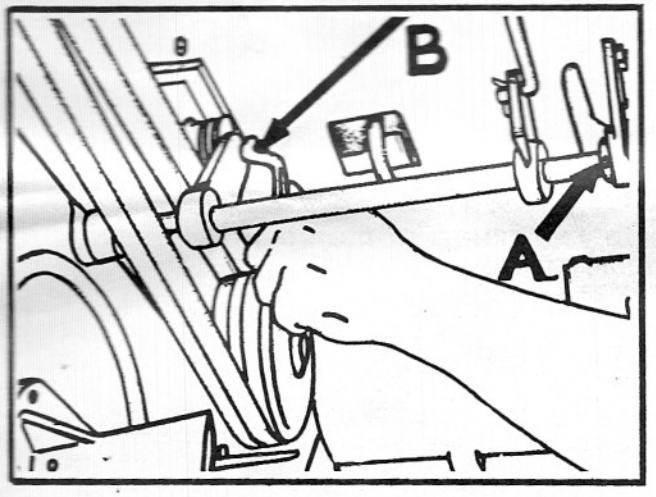
1. Remove belt keeper from around transaxle pulley by removing two (2) bolts on outside of tractor frame.
2. Remove cotter pin on clutch shaft (A in Figure 4).
3. Remove bolt from idler lever (B in Figure 4) and remove idler.
4. Slide clutch rod to one side (Figure 7).
5. Remove three (3) bolts holding inner jackshaft mount to frame (Figure 5). This will allow you to slip belts over jackshaft mount.
6. Remove belts (Figure 6).
7. Replace with new belts.

BELT REPLACEMENT

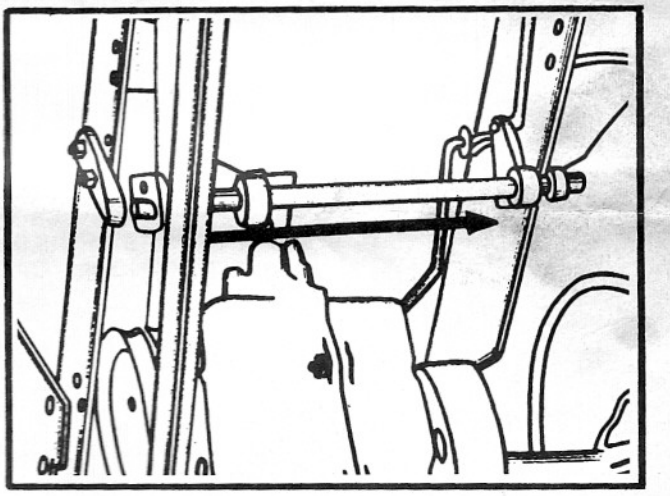
The belts on this unit are specifically designed for this application. Do not substitute belts. Order belts by part number.



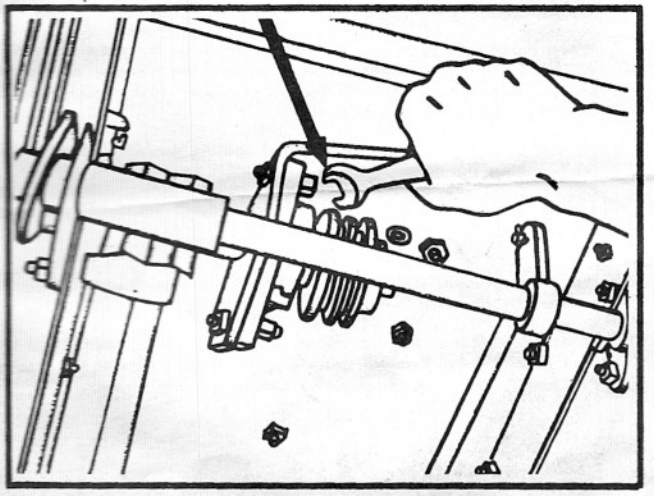
(Figure 6)



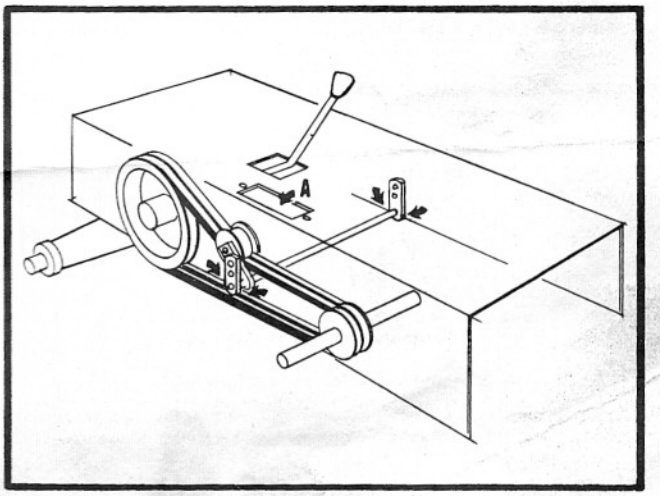
(Figure 4)



(Figure 7)



(Figure 5)



(Figure 8)

ALIGNMENT OF TRANSAXLE BELTS

The transmission input pulley and corresponding drive pulley on the jackshaft are aligned at the factory and should not need adjustment in the field. To properly align:

1. Remove the idler inspection cover on the frame of the tractor near the shift lever.
2. Loosen slightly the four (4) nuts which hold the two (2) brackets that support the idler shaft.
3. Put transmission in neutral. Start engine and engage clutch. Through the idler inspection opening observe how the roller and belts track (A in Figure 8).
4. Tap brackets (arrows in Figure 8) with a hammer to align, under no load conditions. Belts should follow near outside edge of idler roller. Under load, belts will move toward inside.
5. Retighten nuts when proper adjustment has been made.
6. Replace inspection cover.

LUBRICATION

The tractor has a total of seven grease fittings which require lubrication with general purpose automotive grease. Before lubricating, wipe each grease fitting with a rag to prevent grit and dirt from being carried into the bearings with the grease. Use a standard grease gun for the following fittings:

1. Front Axle and Spindles (3).
2. Front Wheel Assembly (2).
3. Steering Mechanism (2).

See frame parts drawing for location.

Also be sure to oil the steering mechanism. There is an oil hole in the steering bracket. Ref. Letter (BG) on Page 12.

STEERING ADJUSTMENTS

If excessive play develops in steering gears, the gear mesh can be adjusted by loosening the lock nut (FT on page 8) and turning the adjustment nut clockwise until play is removed. If steering wheel turns freely, tighten the lock nut. If not, the gear mesh is too tight and must be loosened. Re-check steering wheel so it is not too loose.

TIRE PRESSURE

The tractor uses pneumatic tires on all four wheels. The front tires should be inflated to 25 lbs. pressure. The rear tires should be inflated to 10 lbs. pressure. The rear tires are factory inflated to 20 lbs. and should be reduced to 10 lbs. pressure per square inch.

BATTERY

The battery should be kept clean and dry at all times. Keep battery snugly fastened in place. Check battery cables for tight connections. Vent cap should be kept tight, and vent holes in vent caps must be kept open to permit gases formed in the battery to escape. Full maintenance instructions are provided on separate instruction card for the battery. If tractor is not used for an extended period during the winter, remove battery and store in a fully charged condition, in a cool, dry place.

CAUTION

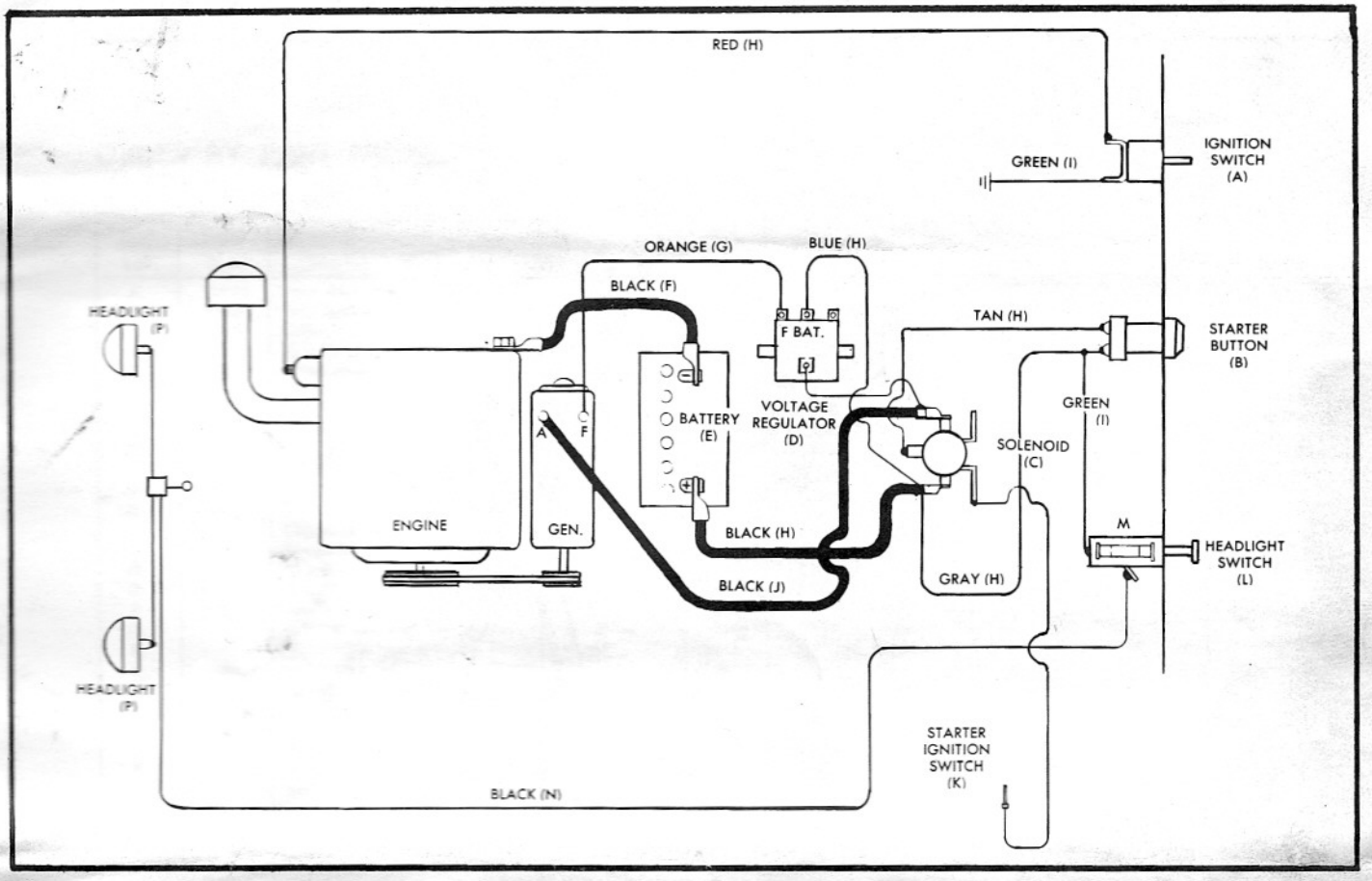
ALL BOLTS AND NUTS SHOULD BE CHECKED AND TIGHTENED DURING THE FIRST TWO HOURS OF USE. PERIODIC CHECKS SHOULD BE MADE THEREAFTER.

THINK OF SAFETY BEFORE YOU USE THE TRACTOR

The mower blades use considerable horsepower. Therefore, the mowing attachment is the most powerful cutting tool; treat it with respect. Before you use the mower, be sure you know the safety rules.

1. Never allow children to operate mower. Anyone else should be given proper instructions as to its operation. Keep children and pets away from area of the mower at all times while it is operating.
2. Always keep hands and feet out from under the mower deck while the engine is running and until you are sure the blades have stopped turning after the engine is shut off or the blade clutch is disengaged. (They will coast for several seconds.)
3. Before you start mowing, walk over the area you are going to cut and pick up all debris which could be picked up and thrown by the blade. Sticks, stones, wire and pieces of metal are a hazard to the mower; can be dangerous to pets and people.
4. Learn how to stop the tractor engine instantly.
5. When moving the tractor along paths and walks, and at all times when it is not actually cutting grass, keep the blade clutch disengaged.
6. Don't attempt any service operations while the engine is running. Disconnect the spark plug wire to prevent accidental starting.
7. When mowing high grass or weeds, start with the mowing attachment at its highest position. This lessens the danger of striking hidden objects. Then take a second cut after first checking to be sure there are no obstacles.
8. Fill the gasoline tank outdoors. Avoid spilling gasoline. Don't smoke while filling the tank.
9. Stop the engine and disengage the blade clutch whenever you leave the tractor.
10. Don't stop or start suddenly when going uphill or downhill. Exercise caution on sidehills.
11. If mower strikes a foreign object, stop the mower, tractor and engine immediately. Remove spark plug wire and inspect the mower for damage. Repair any damage before starting again.

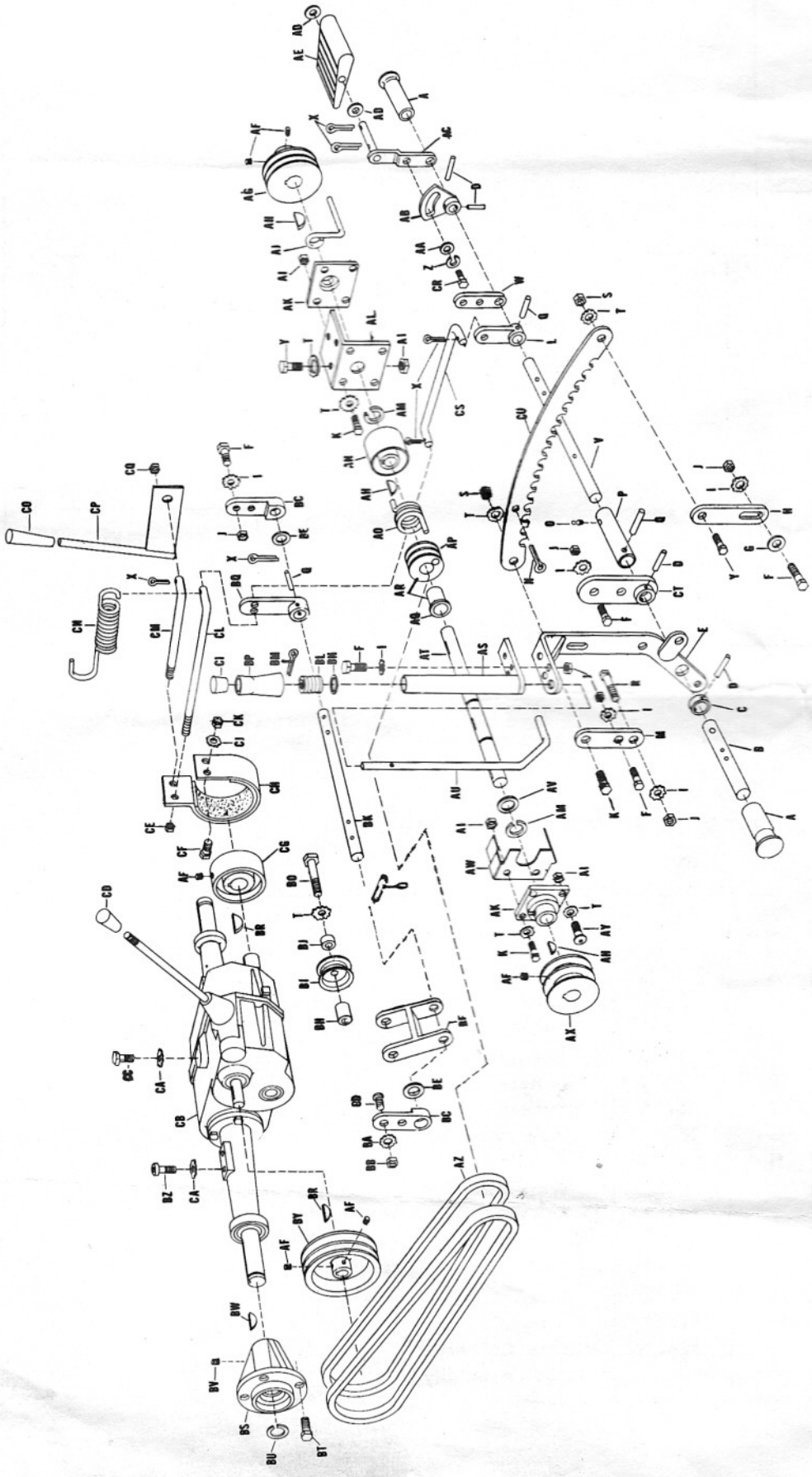
ELECTRICAL SYSTEM PARTS LIST & WIRING DIAGRAM



ORDER BY PART NUMBER

Ref. Let.	Part No.	Description
A	11016	Ignition Switch
B	9267	Starter Button
C	2461	Solenoid
D	2460	Voltage Regulator
E	2772	Battery — 12 Volt
F	16475	Battery Cable Assembly
G	16481	Wire Assembly
H	9136	Wire Assembly
I	9130	Wire Assembly
J	16478	Battery Cable Assembly
K	16388	Starter Switch Assembly
L	9270	Light Switch
M	11512	Fuse
N	14380	Wire
O	12811	Wire Connector
P	14402	Light Assembly

DRIVE-CLUTCH, BRAKE & LIFT PARTS



DRIVE-CLUTCH, BRAKE & LIFT PARTS LIST

ORDER BY PART NUMBER

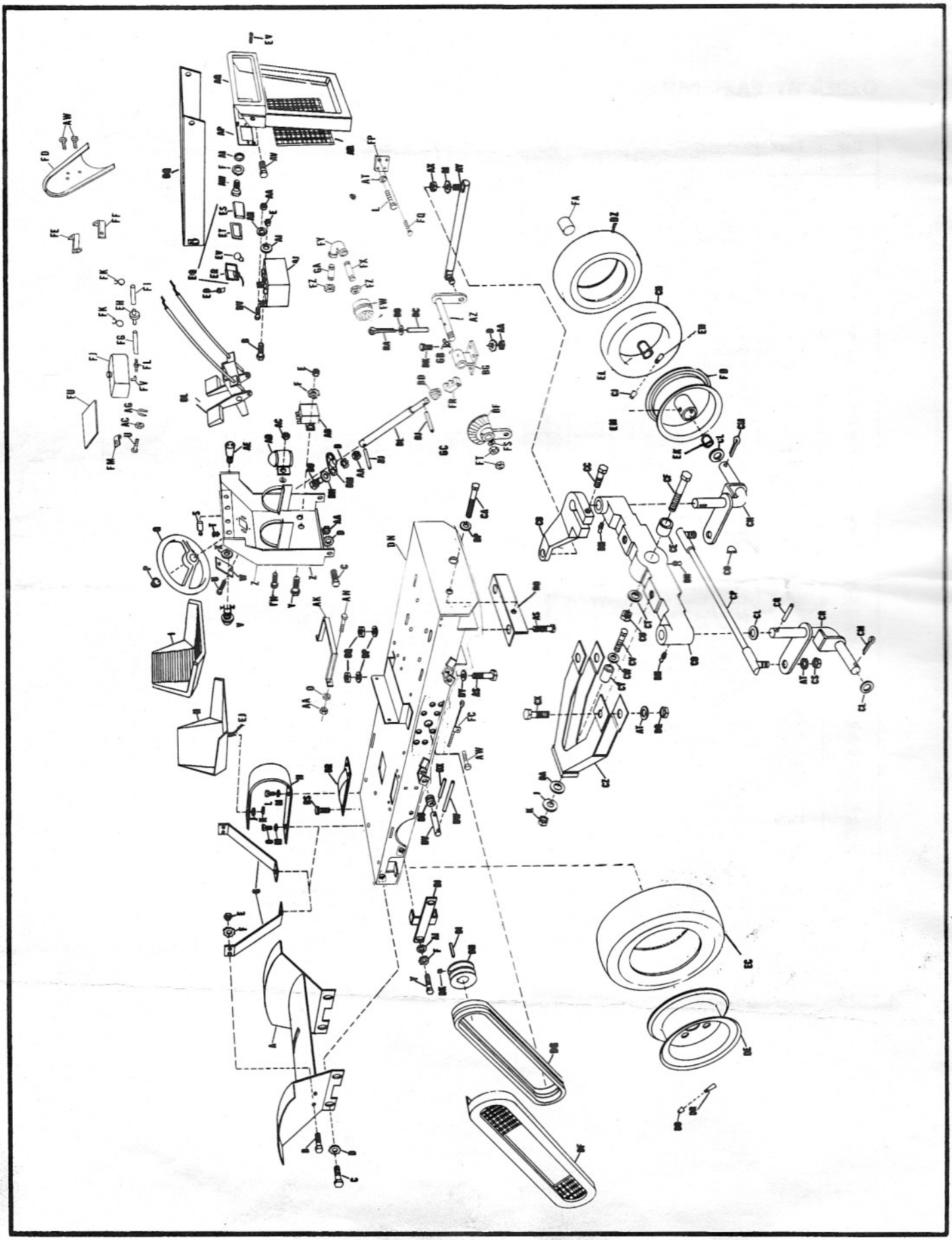
Ref. Let.	Part No.	Description	No. Req'd
A	10995	Foot Rest Sleeve	2
B	9186	Foot Rod, R.H.	1
C	9029	Collar	1
D	*	5/16 x 1¼ Roll Pin	7
E	9221	Lever Assembly	1
F	*	5/16-18 x ¾ Hex. Hd. Cap Screw, Plated	5
G	*	¼ Flat Washer, Plated	1
H	9050	Link, Rack Mount	1
I	*	5/16 External Tooth Washer	6
J	*	5/16-18 Hex. Nut, Plated	6
K	*	3/8-16 x 1¼ Hex. Hd. Cap Screw	7
L	9113	Clutch Lever	1
M	9054	Strap, Rack Mount	1
N	*	3/16 x ¾ Cotter Key	1
O	1031	⅛ x 27 NPT Grease Fitting	1
P	9060	Inside Collar	1
Q	*	¼ x 1¼ Roll Pin	5
R	*	5/16-18 x 1¼ Hex. Hd. Cap Screw	1
S	*	3/8-16 Hex. Nut	2
T	*	3/8 External Tooth Washer	14
V	10994	Foot Rod, L.H.	1
W	9027	Mount	1
X	*	⅛ x 1 Cotter Key, Plated	7
Y	*	3/8-16 x ¾ Hex. Hd. Cap Screw, Plated	5
Z	*	3/8 Spring Lock Washer	1
AA	*	3/8 Flat Washer, Plated	1
AB	10778	Adjustment Disc. Assembly	1
AC	10779	Clutch Pedal Arm Assembly	1
AD	*	7/16 Flat Washers, SAE	2
AE	3493	Pedal Pad	1
AF	*	5/16-18 x 5/16 Socket Set Screw, Knurled Point	8
AG	9109	Pulley, P.T.O.	1
AH	*	3/16 x 3/8 Woodruff Key	3
AI	*	3/8-16 Hex. Nut	10
AJ	6232	Belt Finger	1
AK	9269	Bearing Sealmaster	2
AL	9146	Mount, Jackshaft	1
AM	4487	Retaining Ring	2
AN	10947	Spring Sleeve Assembly	1
AO	10987	Spring, Torsion	1
AP	10948	Pulley	1
AQ	10985	Bearing	1
AR	10986	Pulley Assembly	1
AS	9194	Lift Handle Assembly	1
AT	10949	Shaft	1
AU	9203	Rod, Handle Lock	1
AV	1230	Washer	1
AW	9160	Belt Guide	1
AX	9166	Jackshaft Input Pulley	1

ORDER BY PART NUMBER

Ref. Let.	Part No.	Description	No. Req'd
AY	9696	3/8-16 x 1 Allen Sock. Rd. Hd. Screw	2
AZ	9305	A-50 V-Belt (Match Set of 2)	2
BA	*	5/16 External Tooth Lock Washer	8
BB	*	5/16-18 Hex. Nuts	8
BC	9099	Bracket, Main Drive	2
BD	10888	5/16-18 Wafer Hd. Bolts	2
BE	2551	Flat Washer	1
BF	16043	Lever Drive Idler R.H.	1
BH	9371	Bushing	1
BI	9114	Idler Roller	1
BJ	9354	Spacer	1
BK	9151	Shaft, Clutch & Brake	1
BL	9041	Spring, Compression	1
BM	*	⅛ x ¾ Cotter Key	1
BN	9055	Washer, Flat	1
BO	*	3/8-24 x 2½ Hex. Hd. Cap Screw, Plated	1
BP	9223	Grip	1
BQ	9478	Clutch & Brake Lever	1
BR	*	3/16 x ¾ Hypro Key	2
BS	9138	Hub, Wheel	2
BT	2433	Wheel Bolts, 7/16-20 x ¾	10
BU	1043	Snap Rings	2
BV	*	3/8-16 x ¾ Sq. Hd. Set Screw	2
BW	*	Woodruff Keys, ¼ x 1⅛	2
BY	9187	Input Trans. Pulley	1
BZ	*	3/8-16 x 1 Sock. Hd. Cap Screw	4
CA	*	3/8 External Tooth Washers	5
CB	12417	Transaxle	1
CC	*	3/8-16 x 1 Cap Screw	1
CD	2554	Knob, Gear Shift	1
CE	*	5/16-18 Elastic Stop Nut	2
CF	*	¼-20 x ¾ Hex. Hd. Cap Screw	2
CG	9139	Brake Drum	1
CH	9202	Brake Shoe Assembly	1
CI	9239	Tip, Handle Lock Rod	1
CJ	*	¼ External Tooth Lock Washer, Plated	2
CK	*	¼-20 Hex. Nut	2
CL	9153	Rod, Brake	1
CM	9179	Rod, Parking Brake	1
CN	9042	Spring, Drive Idler	1
CO	9258	Grip, Lever	1
CP	9102	Lever, Parking Brake Ass'y	1
CQ	*	3/8-16 Elastic Stop Nut	1
CR	*	3/8-16 x ¾ Hex. Hd. Cap Screw, Plated	1
CS	9152	Clutch Rod	1
CT	9062	Foot Rod Mount Ass'y	1
CU	13748	Rack	1

*Common Hardware. Purchase Locally

FRAME PARTS



FRAME PARTS LIST

ORDER BY PART NUMBER

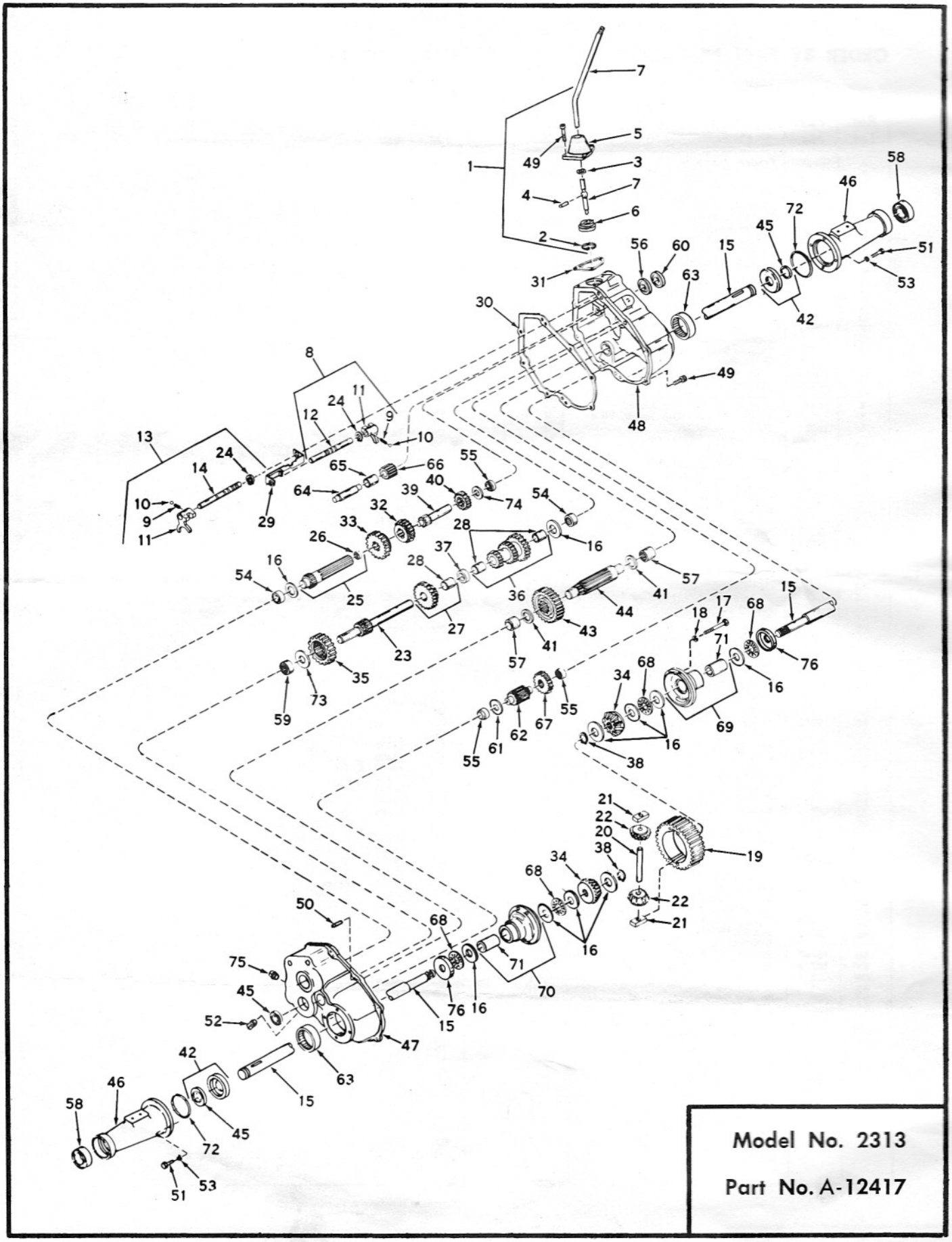
Ref. Let.	Part No.	Description	No. Req'd
A	10939	Fender Assembly	1
B	*	1/4-20 x 3/4 Hex. Cap Screw, Plt'd	6
C	*	5/16-18 x 3/4 Hex. Cap Screw, Plt'd	12
D	*	5/16 External Tooth Washers Plt'd	20
E	*	1/4-20 Hex. Nut, Plated	4
F	*	1/4 External Tooth Washers, Plt'd	15
G	9196	Fender Braces	2
H	10643	Tractor Seat	1
I	10644	Seat Pad	1
J	*	1/2 Split Lock Washer, Plated	2
K	*	1/2-13 Hex. Nut, Plated	2
L	*	3/8-16 x 3/4 Hex. Cap, Plated	1
M	*	3/8 External Tooth Washers, Plt'd	4
N	9137	Spring — Tractor Seat	1
O	*	3/8-16 x 1 Hex. Cap, Plt'd	1
P	10973	Cap, Steering Wheel	1
Q	10972	Steering Wheel	1
S	9257	Plug — Button	1
T	9240	Shock Pads	3
U	*	10-24 x 1/2 Rd. Hd. Screws, Plt'd	5
V	11015	Ignition Switch	1
W	12420	Plate — Choke & Throttle — Shift	1
X	11412	2551 Washer, Zinc Plated	1
Y	*	1/4-20 x 1/2 Hex. Cap Screw, Plt'd	4
Z	16321	Stand Assembly	1
AA	*	5/16-18 Hex. Nut, Plated	17
AB	2460	Voltage Regulator	1
AC	*	10-24 Flex Lock Nuts, Plated	3
AD	2461	Solenoid	1
AE	9267	Starter Button	1
AG	12540	Clip, Throttle Housing	1
AH	*	5/16 Flat Washer, Plated	1
AI	*	1/4 Flat Washer, Plated	10
AJ	2772	Battery, 12 Volt	1
AK	9184	Battery Strap	1
AN	*	5/16-18 x 1 1/2 Hex. Cap Screw, Plt'd	2
AP	16339	Grill, Upper	1
AQ	16298	Grill Casting	1
AR	16342	Grill, Lower	1
AS	*	3/8-16 x 1 1/2 Hex. Hd. Cap Screw, Plated	8
AT	*	3/8 Split Washer, Plated	8
AU	*	3/8-16 Hex. Nut, Plated	4
AV	4360	5/16-18 x 7/8 Nylock Hex. Hd. Cap Screw, Plated	2
AW	*	1/4-20 x 3/8 Cap Screw, Plated	7
AX	*	3/8-24 Hex. Nut, Plated	2
AY	10891	Steering Rod Ass'y	1
AZ	16328	Pitman Arm Assembly	1
BA	*	Cotter Pin, Plated, 1/8 x 2	1
BB	9076	Riveting Washer, 9/64 ID x 7/16 OD x .046, Plated	1
BC	*	Roll Pin, 5/16 x 1 1/2	1
BD	12087	Gear — Pinion	1
BE	2551	Washer	1
BF	16331	Gear — Bevel	1
BG	16317	Bracket — Lower Steering	1
BH	1031	Grease Fitting, 1/8 N.P.T.	5
BJ	*	Roll Pin, 1/4 x 1 1/4	2
BK	*	5/16-18 x 1 Hex. Hd. Cap Screw, Plated	4
BL	16330	Shaft, Steering	1
BM	10890	Flange Bearing — Upper Steering	1
BN	*	5/16 Flat Washer, Plated	2
BO	*	5/16-18 x 5/8 Hex. Hd. Cap Screw, Plated	2
BP	*	3/8 Split Washers	10
BQ	*	3/8-16 Hex. Nuts, Plated	6
BR	9145	Cover, Belt Idler	1
BS	9278	1/4-20 x 1/2 Hex. Hd., Type F, Self-Tapping Screw	4
BU	10747	Spring — Compression, Plated	4
BV	10744	Pin — Spring, Plated	4
BW	*	1/4 x 2 3/4 Roll Pin, Plated	4
BX	*	5/32 x 1 3/4 Roll Pin, Plated	4
BY	*	3/8 Flat Washer, Plated	3
CA	11005	3/8-16 x 5 1/2 Hex. Cap Screw, Plt'd	1
CB	10790	Drag Link Arm — L.G. Spindle	1
CC	*	5/16-24 x 1 1/4 Hex. Hd. Cap Screw HT	1
CD	10740	Axle, Front	1
CE	10769	Pivot Bushing	1
CF	10783	Cap Screw — Special	1

ORDER BY PART NUMBER

Ref. Let.	Part No.	Description	No. Req'd
CH	3062	Tube, 4.8/400 x 8	2
CJ	3823	Cap	2
CL	1020	Washer, Flat	3
CM	*	1/8 x 1 Cotter Key, Plated	2
CN	10752	Spindle, L.H.	1
CO	*	3/16 x 3/4 Woodruff Key	1
CP	9142	Tie Rod	1
CQ	*	Roll Pin, 1/4 x 1 1/4	1
CR	9200	Spindle, R.H.	1
CS	*	3/8-24 Hex. Nut, Plated	2
CT	*	5/8 Split Washer	1
CU	*	5/8-11 Hex. Nut, Plated	1
CV	*	1/2-13 x 2 1/4 Hex. Hd. Cap Screw, Plated	1
CW	*	7/16 Flat Washer (Light)	1
CX	*	3/8-16 x 2 3/4 Hex. Hd. Cap Screw, Plated	2
CY	10771	Sleeve, Radius Rod	1
CZ	10736	Ass'y, Radius Rod	1
DA	10895	Washer	1
DD	3823	Valve Cap	2
DE	9492	Wheel	2
DF	16651	Belt Guard Assembly	1
DG	16348	V-Belt, Matched Set	2
DH	9172	Engine Pulley	1
DI	*	1/4 x 1/4 x 2 Sq. Key	1
DJ	12414	Belt Keeper Assembly	1
DK	*	5/16-18 x 5/16 Socket Set Screw	1
DL	16347	Throttle & Choke Control	1
DN	16315	Frame	1
DO	16354	Angle, Engine Adjustment	1
DQ	11001	Hood Assembly	1
DR	10954	Valve Stem	2
DV	*	5/16-18 x 3/4 Carriage Bolt, Plt'd	1
DW	*	3/8-16 x 1 1/4 Hex. Hd. Cap Screw, Plated	2
DZ	12757	Tire, 6/6.50-8, Front	2
EC	12760	Tire, Rear	2
ED	12122	Tube, Rear	2
EF	*	3/8-16 x 3/4 Hex. Hd. Cap Screw	2
EG		12 H.P. Kohler w/Starter	1
EJ	11406	1/2-13 Short Neck Carriage Bolt	1
EK	12106	Bearing (Sealed)	2
EL	12107	Bearing (Unsealed)	2
EM	12105	Grease Fitting	2
EN	10631	Valve Stem	2
EP	14378	Tinnerman Clip	2
EQ	14402	Light Assembly	2
ER	14403	Reflector & Socket	2
ES	14404	Lens	2
ET	14405	Gasket	2
EU	14406	Bulb	2
EV	14389	#8 Ph. Hd. Sheet Metal Screw, Type B	6
FA	12108	Cap, Wheel Bearing	2
FB	13197	Wheel	2
FC	16388	Starting Switch Assembly	1
FD	16409	Belt Guard	1
FE	16410	Bracket Assembly	1
FF	16411	Bracket Assembly	1
FG	11074	Fuel Hose	1
FH	12185	Filter	1
FI	12184	Fuel Hose	1
FJ	16484	Gas Tank	1
FK	16486	Clamps	4
FL	16485	Fitting	1
FM	13699	Clamp	1
FN	16001	1/4-20 x 3/4 Nylon Screw	1
FO	16000	Insulating Washer	1
FP	16388	Grill Mounting Plate	1
FQ	*	3/8-16 x 1/2 Flat Head Undercut Machine Screw	6
FR	16544	Steering Gear Bracket Ass'y	1
FS	*	5/8 Heavy Flat Washer	1
FT	14170	5/8-18 Hex. Jam Nut	2
FU	4639	Spark Plug Boot	1
FV	16485	Elbow	1
FW	12313	Muffler	1
FX	16646	Nipple	1
FY	16645	Elbow	1
FZ	11359	Conduit Nut	2
GA	16644	Nipple	1
GB	9277	Grease Fitting	1
GC	3041	Grease Fitting	1

*Common Hardware. Purchase Locally.

TRACTOR TRANSAXLE PARTS



Model No. 2313

Part No. A-12417

TRACTOR TRANSAXLE PARTS LIST

ORDER BY PART NUMBER

Ref. No.	Part No.*	Description
1	784110	Lever & Housing Assy., Shift (Incl. Nos. 2 thru 7)
2	792016	Ring, Snap
3	792001	Ring, Quad
4	792002	Pin, Roll
5	784093	Housing, Shift Lever
6	784094	Keeper, Shift Lever
7	784111	Lever, Shift
8	784054	Rod Assy., Shift (Incl. Nos. 9 thru 12 and 24)
9	792003	Spring
10	792004	Ball, Steel
11	784004	Fork, Shifter
12	784055	Rod, Shifter (3rd & 4th)
13	784056	Rod Assy., Shift (Incl. Nos. 9, 10, 11 and 14)
14	784057	Rod, Shifter (low)
15	774081	Axle
16	780042	Washer, Thrust
17	792005	Screw, Hex hd. cap ¼-20 x 2-½
18	792006	Lockwasher, ¼"
19	778033	Gear, Ring
20	786019	Pin, Drive
21	786027	Block, Drive
22	778065	Pinion, Bevel
23	776029	Shaft & Gear, Brake
24	792017	Ring, Snap
25	776026	Shaft & Bearing Assy., Piston (Incl. No. 26)
26	780018	Bearing
27	778034	Gear Cluster Assy. (Incl. No. 28)
28	780053	Bushing
29	784074	Stop, Shifter
30	788023	Gasket, Case & Cover
31	788022	Gasket, Shift Lever Housing
32	778019	Gear, Shifting (3rd & 4th)
33	778020	Gear, Shifting (1st, 2nd & Rev.)
34	778066	Gear, Bevel
35	778037	Gear, Idler
36	778035	Gear Cluster Assy. (Incl. No. 28)
37	786024	Spacer
38	792018	Ring, Snap

Ref. No.	Part No.*	Description
39	776027	Shaft, Input
40	778024	Spur Gear, Input Shaft
41	780052	Washer, Thrust
42	788021	Seal & Retainer Assy., Oil (Incl. No. 45)
43	778036	Gear, Output
44	776028	Pinion, Output
45	788008	Seal, Oil
46	782019	Housing, Axle
47	772040	Cover Assy., Transaxle (Incl. Nos. 54, 55, 57, 59 & 63)
48	770012	Case Assy., Transaxle (Incl. Nos. 54, 55, 57 & 63)
49	792007	Screw, Socket hd. cap ¼-20 x ¾
50	786026	Pin, Dowel
51	792028	Screw, Hex hd. 5/16-18 x ⅞
52	792019	Plug, Magnetic Drain
53	792029	Lockwasher, Split 5/16"
54	780049	Bearing, Needle
55	780022	Bearing, Needle
56	780024	Bearing, Ball
57	780047	Bearing, Needle
58	780050	Bearing, Ball
59	780046	Bearing, Needle
60	788025	Seal, Oil
61	780001	Washer
62	776031	Shaft & Pinion
63	780048	Bearing, Needle
64	776030	Shift, Reverse Idler
65	786025	Spacer, Reverse Idler
66	778016	Idler, Reverse
67	778038	Spur Gear (22 teeth)
68	780039	Bearing, Thrust
69	774072	Carrier Assy., Differential (Incl. No. 71)
70	774071	Carrier Assy., Differential (Incl. No. 71)
71	780041	Bushing
72	788024	"O" Ring
73	780007	Washer, Thrust
74	780051	Washer, Thrust
75	792010	Plug, Pipe
76	780075	Race, Thrust

COMPLETE ASSEMBLY: Part No. A-12417
Model No. 2313

NOTE: Order Transaxle Repair Parts from your nearest Tecumseh Power Products Service Outlet. Give Model No., Part No. and Quantity.

38" MOWER Model 735 PARTS LIST

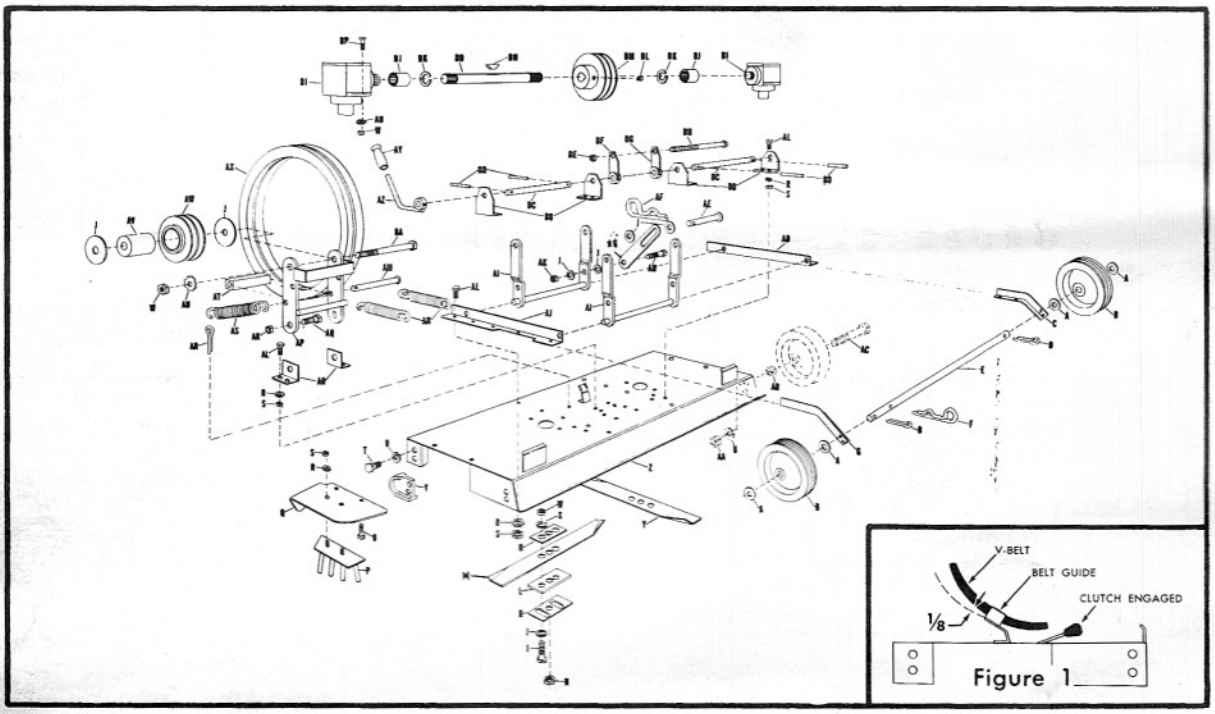


Figure 1

ORDER BY PART NUMBER

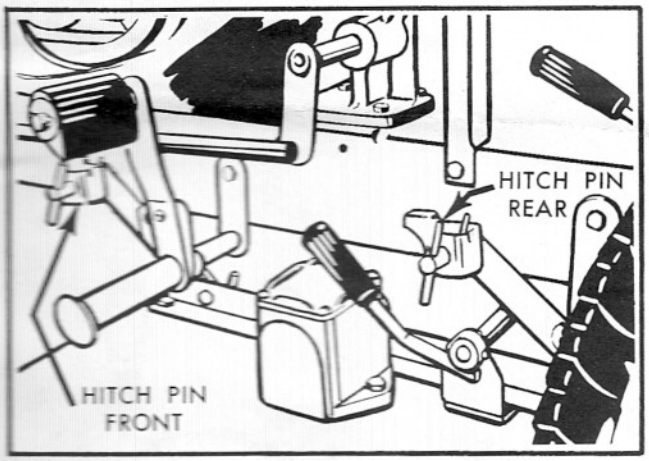
Ref. Let.	Part No.	Description	No. Req'd
A	*	½ SAE Flat Washer, Plated	4
B	9268	Wheel 5 x 1.25	2
C	12619	Bracket—Wheel R.H.	1
D	*	⅛ x ¾ Cotter Pin, Plated	2
E	12617	Axle	1
F	2776	Pin—Spring Clip	1
G	12618	Bracket Wheel L.H.	1
H	9625	⅝ x 18 Flex Lock Jam Nut N.F. Thd. ⅜ Thick	2
I	*	⅜-16 x 1¼ Hex. Hd. Cap. Ht.	4
J	*	⅜ Medium Flat Washer, Plated	16
K	9978	Plate—Nut Lock	2
L	9600	Blade Adapter	2
M	9986	Mower Blade L.H.	1
N	9601	Blade Adapter	2
O	*	¼-20 x ½ Hex. Hd. Capscrew, Plated	2
P	9583	Guard Assembly Grass Deflector L. H.	1
Q	9584	Grass Deflector L.H.	1
R	*	¼ External Tooth Washer Plated	26
S	*	¼-20 Hex. Nuts, Plated	26
T	*	½-20 x 1 Hex. Hd. Capscrew, Plated	4
U	*	½ Spring Lock Washer, Plated	6
V	9183	Skid	2
W	*	⅜-16 Hex. Nut, Plated	9
X	*	⅜ Split Lock Washer	4
Y	9987	Mower Blade R.H.	1
Z	9985	Mower Deck Assembly	1
AA	*	½-13 Hex. Jam Nuts	2
AB	*	½-13 Hex. Nuts, Plated	2
AC	*	½-13 x 3 Hex. Hd. Cap Screw, Plated	2
AD	9981	Top Support R.H.	1
AE	1636	Clevis Pin	1
AF	9261	Spring Clip	1
AG	9026	Link—Connecting	1
AH	*	⅜-16 x 1¼ Hex. Hd. Cap Screw H.T.	4

ORDER BY PART NUMBER

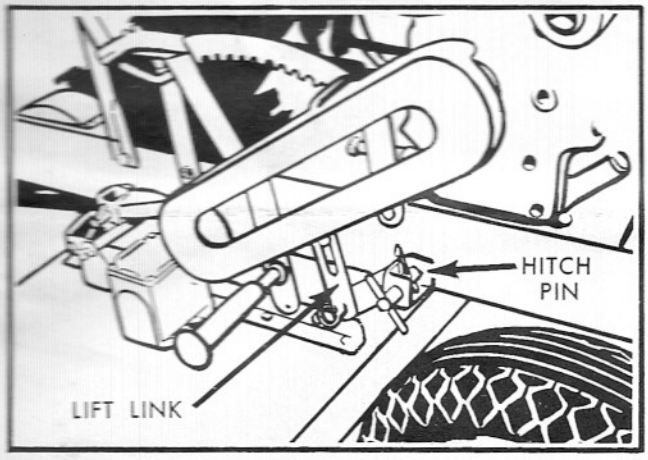
Ref. Let.	Part No.	Description	No. Req'd
AI	9977	Hanger Strap Assembly	2
AJ	9982	Top Support L.H.	1
AK	*	⅜-16 Elastic Stop Nut	3
AL	*	¼-20 x ¾ Hex. Hd. Cap Screw H.T.	14
AM	9979	Clevis Pin, Plated	1
AN	9087	Springs, Idler	2
AO	9031	Mounts	2
AP	10577	Idler Arm Assembly	1
AQ	*	⅜-16 x 1 Hex. Hd. Cap Screw, Plated	2
AR	*	⅛ x ½ Cotter Pin	1
AS	3034	Spring—Brake Block	1
AT	9594	Brake Block	1
AU	*	⅜ External Tooth Washers, Plt'd	5
AV	2136	Shaft	1
AW	10574	Pulley Assembly	1
AX	9303	V-Belts (matched set)	2
AY	9258	Grip	1
AZ	9980	Idler Control Assembly	1
BA	*	⅜-16 x 3 Hex. Hd. Cap Screw, Plated	1
BB	9975	Brackets	4
BC	9169	Rods	2
BD	*	¼ Roll Pins 1¼ Long	4
BE	*	5/16-18 Hex. Nut, Plated	1
BF	9061	Lever L.H.	1
BG	9108	Lever R.H.	1
BH	*	5/16-18 x 4 R.H. Machine Screw, Plated	1
BI	9604	Mower Head	2
BJ	9260	Spline Sleeves	2
BK	9259	Retaining Ring	2
BL	*	5/16-18 x 5/16 Socket Set Screw	1
BM	9110	Pulley	1
BN	*	3/16 x ¾ Woodruff Key	1
BO	9605	Cross Shaft	1
BP	*	⅜-16 x 1⅛ Hex. Hd. Cap Screw Plated	4

*Common Hardware. Purchase Locally.

38" MOWER INSTALLATION & MAINTENANCE
Model 735



(Figure 1)



(Figure 2)

TO MOUNT YOUR MOWER

1. Place mower under tractor.
2. Lift front hanger straps so that they will align with the quick hitch pins on the outside of the tractor frame (see figure 1).
3. Attach front hanger straps with quick attach hitch pins first.
4. Pull mower backward so that the rear hanger straps can be positioned and attached with the hitch pins.
5. Attach lift link to lift lever handle with clevis pin, washers and spring clip (see fig. 2) make sure that there is a washer on each side of the slotted hole of the lift link.
6. Slide belt over P.T.O. pulley, located above mower pulley on underside of tractor frame, making sure that the belts are between the belt finger and pulley. Belt finger should be positioned with 3/16" clearance between belt finger and pulley.
7. Lubricate idler pulley and wheels on mower every 10 hours with motor oil.
8. There are two different locations for the 38" mower wheels. See Mower Parts List for locations and select position desired. The mower wheels can be placed on the extreme outside of the cutting deck as shown in the parts drawing by the dotted wheel or can be mounted inwardly by adding the two brackets (G), (C) and the axle (E) to the cutting deck. (G) and (C) attach on top of (AJ) and (AD) respectively with the same bolts that hold (AJ) and (AD) to the deck. (See parts list, page 12)

MOWER BELTS

The belts on this unit are specifically designed for this application. Do not substitute belts. Order belts by part number.

TO REPLACE MOWER BELTS

1. Remove mower from tractor.
2. Remove idler pulley and brake block from idler arm assembly on mower.
3. Remove retaining rings on each side of cross shaft.
4. Slide spline sleeve collars toward center of mower. This done, shaft and pulley removes from mower.
5. Replace belts.
6. Position cross shaft back in place, slide spline sleeve collar into place on one side and replace retaining ring.
7. Check position of mower blades, blades should be 90 degrees to each other.
8. With blades positioned correctly, slide other spline sleeve collar into place, and fasten with retainer ring. If blades are not positioned correctly, they can cause serious damage to the mower.
9. Position idler pulley and brake block on idler arm assembly of mower, making sure that idler pulley and brake block are in the center of the belts.
10. Remount mower on tractor.

BELT ADJUSTMENT

The proper distance from the belt to the belt guide can be obtained by engaging the clutch with mower in the highest position and adjusting belt guide to within 1/8 inch of the belt. To do this bend belt guide if necessary. See Page 12, Fig. 1.

MOWER BLADES

Your mower has a left and right hand blade. If for any reason you remove the mower blades, you should replace them on the mower as they were.

MOWER HEAD LUBRICATION

Your mower heads are lubricated before leaving the factory. After approximately 10 hours of operation remove plate on each mower head and inspect. We recommend using three (3) tablespoons —standard multi-purpose AMACO lithium grease or Shell multi-purpose Darina grease.

MOWING AND MOWING CONDITIONS

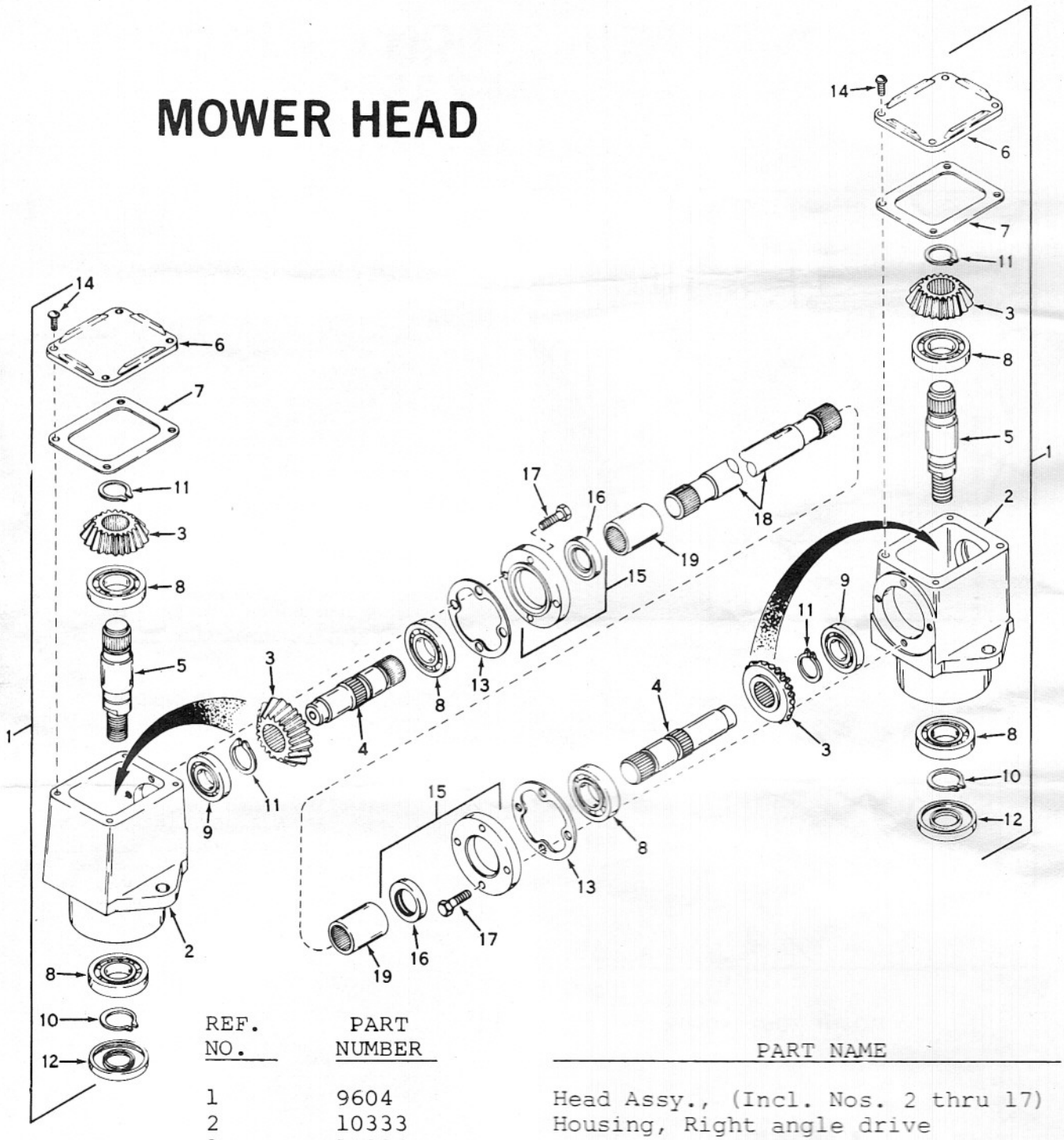
1. Never cut lower or faster than you can maintain a constant engine speed.
2. When mowing over uneven terrain, move mower into raised position so that blades will not strike ground.
3. Slow down on turns.
4. Your mower will cut equally as well in reverse as it does forward.

SAFETY

Be sure anyone operating this mower fully understands all the rules of safe mowing and be certain all guards and grass deflectors are mounted properly.

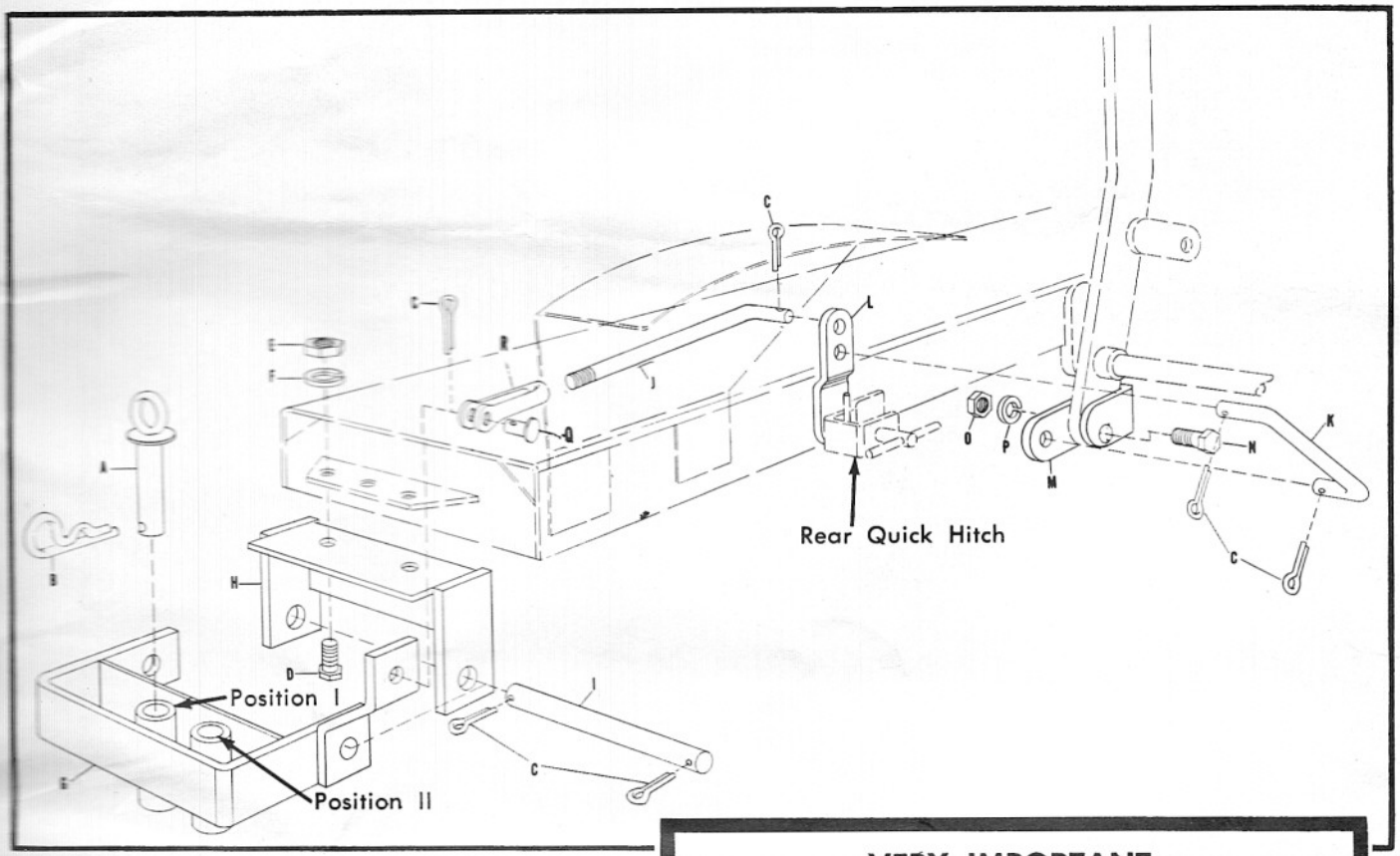
1. No children or pets should be in the area being mowed. Always keep hands and feet away from mower deck while mower blades are turning. Be sure blade clutch is disengaged and blades have completely stopped before dismounting from tractor. This mower has a built in blade breaker, be certain it is always in working order.
2. All objects, cans, sticks, bricks should be picked up from area before mowing is started.
3. When moving from one area to another make sure blade clutch is disengaged.
4. Familiarize yourself with the mower clutch so that your mower can be disengaged instantly if the situation should arise.
5. When cutting tall grass always cut first with mower in full raised position to lessen the danger of hitting hidden objects. Objects can then be easily removed for safe mowing.
6. Gasoline and oil should always be added outdoors. Avoid spilling on engine and tractor. Always wipe off spilled gas or oil overflow.

MOWER HEAD



REF. NO.	PART NUMBER	PART NAME
1	9604	Head Assy., (Incl. Nos. 2 thru 17)
2	10333	Housing, Right angle drive
3	10334	Gear, Miter
4	10335	Shaft, Input pinion
5	10336	Shaft, Output
6	10337	Cover
7	10338	Gasket, Cover
8	10339	Bearing, Ball
9	10340	Bearing, Ball
10	1323	Ring, Snap
11	10341	Ring, Snap
12	10342	Seal, Oil
13	10343	Gasket, Cap
14	10346	Screw, Rd. hd. self tap, 10-24 x ½
15	10344	Cap & Seal assy., Retainer (Incl. No. 16)
16	10345	Seal, Oil
17	11-4-20-8-0	Screw, Hex hd., ¼-20 x 7/8
18	9605	Shaft, Input Connector
19	9260	Coupling, Input shaft

HITCH MODEL 960



VERY IMPORTANT

This hitch is required for using and lifting all ground engaging tools. The standard hitch which is part of the tractor frame, can be used for all regular pull behind attachments that do not need to be lifted.

ORDER BY PART NUMBER

Ref. Let.	Part No.	Description	No. Req'd
A	11852	Hitch Pin	1
B	9677	Spring Clip	1
C	*	⅛ x 1 Cotter Pin, Plated	6
D	*	½-13 x 1¼ Hex. Hd. Cap Screw Plated	2
E	*	½-13 Hex. Nut, Plated	2
F	*	½ Med. Lock Washer, Plated	2
G	12712	Hitch Arm Assembly	1
H	12716	Hitch Support Assembly	1

Ref. Let.	Part No.	Description	No. Req'd
I	12719	Pin—Hitch Pivot	1
J	13205	Connecting Link—Rear	1
K	11185	Lift Link—Front	1
L	11183	Adjustment Lever	1
M	11182	Adapter Bracket	1
N	*	¼-20 x 1¼ Hex. Hd. Cap Screw, Plated	1
O	*	¼-20 Hex. Nut, Plated	1
P	*	¼ Split Washer, Plated	1
Q	3441	Clevis Pin	1
R	2490	Clevis	1

*Common Hardware. Purchase Locally.

TO ATTACH HITCH

1. The hitch support assembly (H) is bolted from the under side to the tractor rear hitch plate (see parts drawing above).
2. Bolt adapter bracket (M) to the lower hole of the life handle (as shown in above drawing making sure that the hole the bolt passes through is to the bottom side of the bracket.
3. Attach adjustment lever (L) to the rear quick hitch pin on the same side as the lift handle. (See above drawing).
4. Attach lift link (K) to adjustment lever (L) using the lower of the two top holes, and the adapter bracket (M). (See above drawing).
5. Attach connecting link (J) to adjustment lever (L), using the upper of the two top holes. Attach the other end of (J) with clevis (R) to the hitch arm assembly. Secure with clevis pin and cotter pin.
6. To increase depth at which ground engaging tools will operate turn clevis in. To decrease depth turn clevis out.

All attachments are attached to hitch arm assembly with hitch pin (A) and spring clip (B). All attachments (except the mold board plow) are attached at position one. The mold board plow is attached at position two.

Senator Tractors, Plymouth, Wisconsin, will warrant their products against defective material and workmanship for a period of one (1) year (30 days if in commercial use) under normal use and service. We will make good at our authorized service outlet such parts which shall, within one (1) year after delivery to original purchaser (within 30 days if in commercial use), be returned to our authorized service outlet by the original purchaser and found upon examination to be defective.

This warranty is made in lieu of all other warranties, expressed or implied, and in lieu of all other obligations or liabilities which we otherwise have or may have, and we do not assume, nor do we authorize our service outlets, distributors or our agents to assume for us, any other liability regarding our products.

This warranty does not apply to any Senator products which have been repaired or altered by other than our authorized service outlet in any way. This warranty does not apply to any Senator products which have been subject to misuse, negligence or accident.

Furthermore, this warranty does not apply to the engine which is covered by the warranty of the engine manufacturer. The requirements established by the engine manufacturer, as stated in the engine manual or in any warranty cards or instructions attached to the engine, must be complied with.

This warranty does not cover adjustments to ignition, parts, carburetors, spark plugs, or other adjustments made necessary through normal operations.

All transportation costs on products or parts submitted to Senator or its distributors under this warranty must be paid by the user. No products or parts are to be returned without first obtaining written permission from the Service Department of Senator Tractors, Plymouth, Wisconsin.

The manufacturer reserves the right to incorporate changes in the design of this product without obligation to make such changes on units previously sold.

HOW TO OBTAIN SERVICE

In order to assure you of an adequate supply of Parts and Service information, the Senator Tractors maintains a nationwide system of Parts Distributors and Service Outlets.

Your local dealer most likely maintains such a supply of parts. If not, he will be able to furnish the name and address of the Service Outlet nearest you. Service on your engine can be obtained through the engine manufacturer's service outlets. See the yellow pages of your phone book.

HOW TO OBTAIN PARTS AND SERVICE UNDER WARRANTY

Please fill in and mail your Warranty Registration and Information Card, and read Warranty Policy.

For Engine Warranty Claim, see Engine Manufacturer's Warranty Provisions.

Senator Tractors stands behind all the products they manufacture. In order to receive parts and service under the Warranty Provisions, all claims must be made on a Senator Warranty Form, to be filled out by your dealer. Be sure to give him all the information he needs — name, serial number, correct part numbers, and quantity of each part. This procedure will insure fast, accurate settlement of your claim.

HOW TO ORDER REPAIR PARTS

When ordering parts from your local Senator Dealer, be sure to send the following information:

- Serial number. Include all letters and numbers.
- Model name. Include all letters and numbers.
- Complete part number.
- Name of each part.
- Quantity of each part.

Fill in the following for your future reference:

For ordering Senator Parts:

Unit Name _____

Model Number _____

Complete Serial Number _____

For ordering Engine Parts from the Engine Manufacturer:

Engine Model Number _____

Engine Serial Number _____

8-69 Part No. 16396